

IN THE CLAIMS:

1. (Canceled)

2. (Currently Amended) A recombinant adenovirus ~~with~~ having a reduced tissue tropism for liver cells as compared to the corresponding *wild type* adenovirus, said recombinant adenovirus comprising:

at least a region of a fiber protein comprising a tissue tropism determining fragment of an adenovirus, said fiber protein being a fiber protein of an adenovirus selected from the group consisting of adenovirus 12, adenovirus 16, adenovirus 28 and adenovirus 40-L.

3 – 20. (Canceled)

21. (Currently Amended) A ~~pharmaceutical~~ composition comprising:
the recombinant adenovirus of claim 2; and
a suitable vehicle.

22 – 24. (Canceled)

25. (Currently Amended) An adenovirus capsid ~~with~~ having a reduced tropism for liver cells as compared to the corresponding *wild type* adenovirus capsid, said adenovirus capsid comprising:

proteins from at least two different adenoviruses; and

wherein at least one of the proteins includes at least a tissue tropism determining fragment of a fiber protein, ~~of subgroup B adenovirus origin~~ said fiber protein being a fiber protein of an adenovirus selected from the group consisting of adenovirus 12, adenovirus 16, adenovirus 28, and adenovirus 40-L.

26 - 27. (Canceled)

28. (Previously Presented) A construct deposited with the ECACC under deposit number 01121708.

29. (Previously Presented) A construct deposited with the ECACC under deposit number 01121710.

30. (Previously Presented) A construct deposited with the ECACC under deposit number 01121709.

31. (Previously Presented) A construct deposited with the ECACC under deposit number 01121711.

32. (Previously Presented) A construct deposited with the ECACC under deposit number 0112712.

33 – 36. (Canceled)

37. (Currently Amended) A method for reducing a tissue tropism of an adenovirus capsid for liver cells as compared to the corresponding *wild type* adenovirus capsid, said method comprising:

i) exchanging a first nucleic acid encoding a tissue-tropism determining fragment of a fiber protein for a second nucleic acid encoding a tissue-tropism determining fragment of a fiber protein of an adenovirus, ~~16~~ said adenovirus selected from the group consisting of adenovirus 12, adenovirus 16, adenovirus 28, and adenovirus 40-L;

ii) introducing the resulting nucleic acid from step i) into a cell capable of producing said adenovirus capsid; and

iii) allowing said cell to produce said adenovirus capsid, thus reducing the tissue tropism of the adenovirus capsid for liver cells as compared to the corresponding *wild type* adenovirus capsid.

38 – 43. (Canceled)

44. (Currently Amended) A recombinant adenovirus comprising:
a recombinant ~~virus~~ adenovirus capsid comprising ~~protein fragments~~ peptides from at least two different ~~viruses~~ adenoviruses;
wherein said recombinant ~~viruses~~ adenovirus capsid has an increased tissue tropism for endothelial cells or smooth muscle cells when compared to other adenovirus capsids of the corresponding wild type adenovirus;
wherein at least one of said peptides comprises a tissue tropism determining region of a fiber protein of an adenovirus selected from the group consisting of adenovirus 11, adenovirus 16, adenovirus 35, and adenovirus 51.

45 – 49. (Canceled)

50. (Currently Amended) The recombinant adenovirus of claim 44, wherein at least one of said ~~protein fragments are~~ peptides is of adenovirus subgroup C origin.

51. (Currently Amended) The recombinant adenovirus of claim 44, further comprising an adenoviral nucleic acid incorporated within a genome of said recombinant ~~virus capsid~~ adenovirus.

52 – 53. (Canceled)

54. (Previously Presented) The recombinant adenovirus of claim 51, wherein said adenoviral nucleic acid is modified such that the capacity of said adenoviral nucleic acid to replicate in a target cell has been reduced or disabled.

55. (Canceled).

56. (Currently Amended) The recombinant adenovirus of claim 44, further comprising at least one non-adenoviral nucleic acid incorporated ~~into~~ within a genome of said recombinant ~~virus capsid~~ adenovirus.

57. (Previously Presented) The recombinant adenovirus of claim 56, wherein at least one of said non-adenoviral nucleic acids is a gene encoding a protein selected from the group of proteins consisting of: an apolipoprotein, a nitric oxide synthase, a herpes simplex virus thymidine kinase, an interleukin-3, an interleukin-1 α , an angiogenesis protein, an anti-angiogenesis protein, an anti-proliferation protein, a smooth muscle cell anti-migration protein, a vascular endothelial growth factor, a basic fibroblast growth factor, a hypoxia inducible factor 1 α and a PAI-1.

58. (Currently Amended) A recombinant adenovirus capsid having an increased tropism for endothelial cells or smooth muscle cells as compared to the corresponding wild type adenovirus, said recombinant adenovirus comprising:

~~proteins~~ peptides from at least two different adenoviruses; and

wherein at least one of the peptides comprises at least a tissue tropism determining fragment region of a fiber protein, of subgroup B adenovirus origin said fiber protein being a fiber protein of an adenovirus selected from the group consisting of adenovirus 11, adenovirus 16, adenovirus 35, and adenovirus 51.

59. (Previously Presented) The recombinant adenovirus of claim ~~[[47]]~~ 44, wherein said subgroup B adenovirus is adenovirus 16.

60. (Currently Amended) A recombinant adenovirus having a capsid with a ~~reduced tropism for liver cells and~~ an increased tropism for smooth muscle cells ~~and or~~ endothelial cells as compared to the corresponding *wild type* adenovirus, said recombinant adenovirus comprising:

a chimeric fiber protein comprising at least the knob domain of a fiber protein of an adenovirus ~~serotype 16; selected from the group consisting of adenovirus 11, adenovirus 16, adenovirus 35, and adenovirus 51;~~

wherein the remaining part of the chimeric fiber protein is of a different adenovirus serotype.

61. (Currently Amended) The recombinant adenovirus of claim 60, further comprising an adenoviral nucleic acid incorporated within ~~the capsid~~ a genome of said recombinant adenovirus.

62. (Previously Presented) The recombinant adenovirus of claim 61, wherein said adenoviral nucleic acid comprises a sequence encoding the chimeric fiber protein.

63. (Canceled).

64. (Previously Presented) The recombinant adenovirus of claim 60, wherein said different adenovirus serotype is an adenovirus serotype of subgroup C.

65. (Previously Presented) The recombinant adenovirus of claim 64, wherein said adenovirus of subgroup C is adenovirus serotype 5.

66 – 68. (Canceled)

69. (Currently Amended) A recombinant adenovirus capsid having a reduced tropism for liver cells as compared to the corresponding *wild type* adenovirus, said recombinant adenovirus comprising:

a chimeric fiber protein comprising at least the knob domain of a fiber protein of adenovirus serotype 16;

wherein the remaining part of the fiber protein is of a different adenovirus serotype.

70. (Previously Presented) The adenovirus capsid of claim 69, wherein said different adenovirus serotype is an adenovirus serotype of subgroup C.

71. (Previously Presented) The adenovirus capsid of claim 70, wherein said adenovirus of subgroup C is adenovirus serotype 5.